

REMARKS

The Office Action of June 5, 2006 has been received and its contents carefully considered.

The present Amendment cancels the apparatus claims. It also revises the method claims in several respects. In particular, the Amendment revises claim 3 to recite gate electrodes, instead of just gates. In addition, the Amendment cancels dependent claims 4 and 9, and revises independent claim 3 to include features derived from these claims. In addition, the Amendment revises claim 3 by adding the following "wherein" clause: "wherein an end point detection of one of the stages of the etching process is based on the etching of the non-doped silicon body." This revision is supported by the passage at page 7 of the application, lines 7-13. In addition, the present Amendment revises the dependent method claims in view of the changes to independent claim 3, and cancels claim 10 (which has become redundant).

As the present application advises in the paragraph bridging pages 2 and 3, two-stage dry etching has been used in the past to produce N-type and P-type polysilicon gate electrodes at the same time. However, the P type gate electrodes have not been fully formed when end point detection for the main etching step occurs for the N-type gate electrodes. Further etching in the second etching step produces P-type gate electrodes that are tapered, as shown in Figure 2 of the application's drawings. The basic reason for this is that P-doped polysilicon and N-doped polysilicon etch at different rates.

The present invention exploits the fact that non-doped polysilicon etches at a rate that lies between the etching rate of P-doped polysilicon and N-doped polysilicon (see the middle paragraph on page 7 of the application). When end point detection for the main etching step is based on the etching of a non-doped polysilicon body (see the above-noted passage at page 7 of the present application, lines 7-13), the amount of taper in the P-type gate electrodes is reduced (see page 8 lines 7-12).

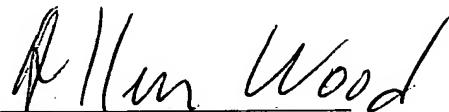
The Office Action rejects independent claim 3 for obviousness based on Gabriel et al, Liau et al, and Ker et al. These references, however, neither disclose nor suggest that a two-stage etching process is used, as is now recited in claim 3, or that the "end point detection of one of the stages of the etching process is based on the etching of the non-doped silicon body" in accordance with claim 3. Section 8 of the Office Action

relies on Lee et al as disclosing a two-stage etching process, but nothing in this references would suggest that the "end point detection of one of the stages of the etching process is based on the etching of the non-doped silicon body" in accordance with claim 3.

The remaining claims depend from claim 3 and recite additional limitations to further define the invention, so they are patentable along with claim 3 and need not be further discussed.

For the foregoing reasons, it is therefore respectfully submitted that this application is now in condition for allowance. Reconsideration of the application is respectfully requested.

Respectfully submitted,



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